Ch2 Quadratics

- Expansion (Factored to Standard Form)
- Factoring Trinomials (Roots)

Handout exam topic sheet

Jun 2-8:15 AM

Factored

$(x+5)(x-2)=0$

$y=a(x-s)(x-t)$

read zeros directly

$-5, +2$

s & t

$\frac{s+t}{2} \Rightarrow \frac{-5+2}{2} = -\frac{3}{2}$

$(-\frac{3}{2}, 10)$

sub $x=-\frac{3}{2}$ into $(x+5)(x-2)$

$(-\frac{3}{2}, -\frac{9}{4})$

Jun 2-9:43 AM

g) $a(a-5)=0$

$0 \quad 5$

$a(x-5)(x-t)$

h) $(4x+3)(5x-2)=0$

$-\frac{3}{4} \quad \frac{2}{5}$

zeros - when ball hits the ground

- breakeven for a business

Jun 2-9:47 AM

Expand

$(x+5)(x-2)=f(x)$

F irst
O utside
I nside
L ast

$x^2-2x+5x-10=f(x)$

$x^2+3x-10=f(x)$

To find a pt [roots]

STANDARD FORM-Allows you

to substitute or

Solve for a specific pt.

Jun 2-9:54 AM

$3x(x+5)-2x(x+2)+3x=0$

$3x^2+15x-2x^2-4x+3x=0$

$x^2+14x=0$

$3(x+2)(x-4)=0$

$3[x^2-4x+2x-8]=0$

$3[x^2-2x-8]=0$

$3x^2-6x-24=0$

Jun 2-9:58 AM

Factor

$n^2+7n-30=0$

$n^2+10n-3n-30=0$

$n(n+10)-3(n+10)=0$

$(n+10)(n-3)=0$

$-10, +3$

Decomposition

A	M
+7	-30

-30

$2, 5$

$-3, +10$

$2y^2+9y+4=0$

$2y^2+8y+1y+4=0$

$2y(y+4)+1(y+4)=0$

$(y+4)(2y+1)=0$

$-4 \quad -\frac{1}{2}$

A	M
+9	+8

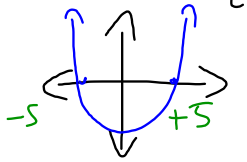
$8, 1$

Jun 2-10:00 AM

$y^2 - 25 = 0$

$(y - 5)(y + 5) = 0$

Difference of Squares



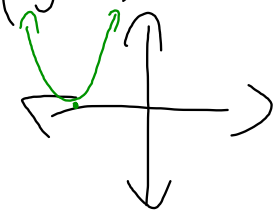
Jun 2-10:08 AM

$y^2 + 10y + 25 = 0$

$\sqrt{a}\ \sqrt{c} \times 2 = b$

$y(5) \times 2 = 10$

$(y + 5)^2 = 0$



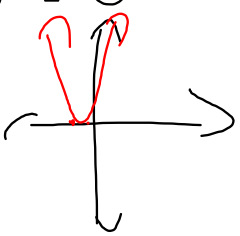
Jun 2-10:10 AM

$4 \times 3y \times 2$

$9y^2 + 24y + 16 = 0$

$(3y + 4)^2 = 0$

$-\frac{4}{3}$



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6 a) $y = x^2 - x - 30$ $y = -24$

$-24 = x^2 - x - 30$

$0 = x^2 - x - 30 + 24$

$0 = x^2 - x - 6$

$x^2 + 2x - 3x - 6$

$x(x+2) - 3(x+2)$

$(x+2)(x-3)$

$(-2, -24)(3, -24)$

A	M
-1	-6
+2	-3

Jun 2-10:14 AM

Please Complete
q. 1, 3-6, 9, 11-13, 16, & 18
p 120 & 121

Jun 2-10:18 AM